



SIoux VALLEY HOSPITAL

1100 South Euclid Avenue
P.O. Box 5039
Sioux Falls, South Dakota 57117-5039
(605) 333-1000

ADJUTANT ROOM

JAN 10 1997

RECEIVED

December 30, 1996

Office of the Secretary
Federal Communications Commission
Room 222
1919 M, Northwest
Washington, DC 20554

DOCKET FILE COPY ORIGINAL

RE: CC Docket No. 96-45

As a response to the request for more information from health care providers regarding the universal service recommendations, you will find enclosed is a summary description of the Sioux Valley Health System Telemedicine Network. The information is formatted as responses to several questions that apply to that request.

The access to bandwidth up to 1.544 Mbps will be a great boost to the practice of telehealth. However, the support structure and backup system, as well as a constant and reliable network as a whole, is the followup piece that is equally important. For example, our current provider does not have the proper line testing equipment for the bandwidth we currently use; we have little confidence in their ability to do a proper line test to diagnose problems. This must be taken into consideration as the infrastructure continues to be developed and expanded.

Sincerely,

Mary DeVany
Telemedicine Services Coordinator

Enclosure

CC: International Transcription Service
The Honorable Reed E. Hunt, Chairman
The Honorable Rachelle B. Chong
The Honorable Susan Ness
The Honorable Julia Johnson
The Honorable Kenneth McClure
The Honorable Sharon L. Nelson
The Honorable Laska Schoenfelder
Martha S. Hogerty

Paul E. Pederson
James Casserly
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Jeanine Poltronieri

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QUESTIONS TO ADDRESS:

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1. Name of Project: *Sioux Valley Health System Telemedicine Network*
2. Please list each of the project's sites: *Sioux Valley Hospital, Sioux Falls, SD
Dakota Medical Center, Vermillion, SD
Canton-Inwood Memorial Hospital, Canton, SD
Pioneer Memorial Hospital, Viborg, SD
Mid-Dakota Hospital, Chamberlain, SD
Lake Area Hospital, Webster, SD
Worthington Regional Hospital, Worthington, MN*

Please answer the following questions for each of your sites:

SITE: *Sioux Valley Hospital, Sioux Falls, SD (hub)*

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *-0-*

4. Name of the project's telecommunications service provider:
U S West Communications (local) and AT&T (interstate long distance & T1 usage)

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56, ISDN (up to 384 Kbps), T-1*

6. Charges for telecommunications service:

Is there a monthly charge? No ☒ Yes
If yes, how much is the charge? *ISDN-\$84/line; T-1-\$5 for months with no use*

Is there a usage-based charge? No ☒ Yes
If yes, how much is the charge? *Long distance only: ~\$20/line/hour*

Is there a distance component (such as a per-mile fee) of the charge? ☒ No ☐ Yes
If yes, how much is the charge?

Was there an installation fee? No ☒ Yes
If yes, how much was the charge? *Switched 56--~\$300; ISDN-\$85/line; T-1-\$555*

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?
Tariffed ☒ Discount

If there is a discount, how much is it? *Based on usage-5%-15%(AT&T); 15%(USWest)*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Receive x-rays, staff educational activities, patient video consultations, build continuity between departments at various system facilities, pediatric home care staff consultations, live radiology studies (barium studies).

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

Probably not--the voice/motion lag would be too distracting for use as an educational tool (128 Kbps) or for patient consults (384 Kbps) at the slower speeds. Also, receiving x-ray images could not be done at a slower speed (Switched 56) since the slower lines have a tendency to cause a bottleneck at the receive site, frustrating the radiologists.

9. What would the implications of having a greater level of bandwidth be? *Radiology images could be received quicker, video quality would be smoother.*

10. Do you have e-mail?

No ☒ Yes

11. Do you have Internet access?

No ☒ Yes

limited

If yes, do you incur long-distance charges by using it?

☒ No ☐ Yes

Please estimate your number of hours of Internet use per month: *10 hours*

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Access Telemedicine Gateway, TIE, misc. information searches, etc.

SITE: *Dakota Medical Center, Vermillion, SD*

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *55 miles*

4. Name of the project's telecommunications service provider: *U S West Communications (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56, ISDN (up to 384 Kbps)*

6. Charges for telecommunications service:

Is there a monthly charge? No ☒ Yes
If yes, how much is the charge? ISDN--\$84; Switched 56--~\$60/month (1 S56 line)

Is there a usage-based charge? No ☒ Yes
If yes, how much is the charge? Long distance only: ~\$18/line/hour(ISDN);
~\$.02/minute (S56)

Is there a distance component (such as a per-mile fee) of the charge? ☒ No ☐ Yes
If yes, how much is the charge?

Was there an installation fee? No ☒ Yes
If yes, how much was the charge? Switched 56--~\$300; ISDN--\$85/line

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?
Tariffed ☒ Discount
If there is a discount, how much is it? Discount is based on long distance usage (5-15%)--ISDN

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)
Send x-rays, staff educational activities, patient video consultations, departmental meetings.

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)
Probably not--the voice/motion lag would be too distracting for use as an educational tool (128 Kbps) or for patient consults (384 Kbps) at the slower speeds. This facility conducts live radiology consultations (barium swallows) via interactive video and the higher rate of speed is important (384 Kbps or higher). Also, the transmission of x-rays could not be done at a slower speed (Switched 56) since the slower lines have a tendency to cause a bottleneck at the receive site.

9. What would the implications of having a greater level of bandwidth be? *images could be received quicker, video quality would be smoother.*

10. Do you have e-mail? ☒ No ☐ Yes

11. Do you have Internet access? ☒ No ☐ Yes
If yes, do you incur long-distance charges by using it? No Yes
Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

SITE: *Pioneer Memorial Hospital, Viborg, SD*

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *45 miles*

4. Name of the project's telecommunications service provider: *U S West Communications (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56*

6. Charges for telecommunications service:

Is there a monthly charge?

No ☒ Yes

If yes, how much is the charge?

~ \$60/month (1 S56 line)

Is there a usage-based charge?

No ☒ Yes

If yes, how much is the charge?

~ \$.02/minute

Is there a distance component (such as a per-mile fee) of the charge?

☒ No ☐ Yes

If yes, how much is the charge?

Was there an installation fee?

No ☒ Yes

If yes, how much was the charge?

Switched 56-- ~ \$450; ISDN--\$85/line

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?

Tariffed ☐ Discount ☐

If there is a discount, how much is it? *Uncertain*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Send x-rays, patient consultations

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if

the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

The transmission of x-rays could not be done at a slower speed (Switched 56) since the slower lines has a tendency to cause a bottleneck at the receive site, frustrating the radiologists.

9. What would the implications of having a greater level of bandwidth be? *images could be received quicker.*

10. Do you have e-mail?

☒ No

Yes

11. Do you have Internet access?

☒ No

Yes

If yes, do you incur long-distance charges by using it? No Yes

Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

SITE: ***Canton-Inwood Memorial Hospital, Canton, SD***

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *25 miles*

4. Name of the project's telecommunications service provider: *U S West Communications (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56*

6. Charges for telecommunications service:

Is there a monthly charge?

No

☒ Yes

If yes, how much is the charge?

~ \$60/month (1 S56 line)

Is there a usage-based charge?

No

☒ Yes

If yes, how much is the charge?

~ \$.02/minute

Is there a distance component (such as a per-mile fee) of the charge?

☒ No

Yes

If yes, how much is the charge?

Was there an installation fee? No Yes
If yes, how much was the charge? *Switched 56-- ~ \$300*

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?
 Tariffed Discount
If there is a discount, how much is it? *Uncertain*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)
Send x-rays, patient consultations

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)
The transmission of x-rays could not be done at a slower speed (Switched 56) since the slower lines has a tendency to cause a bottleneck at the receive site, frustrating the radiologists.

9. What would the implications of having a greater level of bandwidth be? *images could be received quicker.*

10. Do you have e-mail? No Yes

11. Do you have Internet access? No Yes

If yes, do you incur long-distance charges by using it? No Yes
Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

SITE: ***Mid-Dakota Hospital, Chamberlain, SD***

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *150 miles*

4. Name of the project's telecommunications service provider: *U S West Communications (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56, ISDN (up to 384 Kbps)*

6. Charges for telecommunications service:

Is there a monthly charge? No ☒ Yes
If yes, how much is the charge? *ISDN - \$84/line (4 lines)*

Is there a usage-based charge? No ☒ Yes
If yes, how much is the charge? *Long Distance only: ~ \$20/hour/line*

Is there a distance component (such as a per-mile fee) of the charge? ☒ No ☐ Yes
If yes, how much is the charge?

Was there an installation fee? No ☒ Yes
If yes, how much was the charge? *ISDN-\$85/line (4 lines)*

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?
Tariffed ☒ Discount

If there is a discount, how much is it? *Discount is based on long distance usage (5-15%)—ISDN*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Send x-rays, staff educational activities, patient video consultations, departmental and medical staff meetings.

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

Probably not--the voice/motion lag would be too distracting for use as an educational tool (128 Kbps) or for patient consults (384 Kbps) at the slower speeds. The transmission of x-rays could be done at a slower speed (Switched 56), however, the slower lines has a tendency to cause a bottleneck at the receive site.

9. What would the implications of having a greater level of bandwidth be? *images could be received quicker, video quality would be smoother.*

10. Do you have e-mail? ☒ No ☐ Yes

11. Do you have Internet access? ☒ No ☐ Yes

If yes, do you incur long-distance charges by using it? ☐ No ☐ Yes

Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

SITE: *Lake Area Hospital, Webster, SD*

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *120 miles*

4. Name of the project's telecommunications service provider: *Interstate Telecommunications Company (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *ISDN (up to 384 Kbps)*

6. Charges for telecommunications service:

Is there a monthly charge?

No

☒ Yes

If yes, how much is the charge?

Final data not available--installation in progress

Is there a usage-based charge?

No

☒ Yes

If yes, how much is the charge?

Final data not available--installation in progress

Is there a distance component (such as a per-mile fee) of the charge?

☒ No

☐ Yes

If yes, how much is the charge?

Was there an installation fee?

No

☒ Yes

If yes, how much was the charge?

Final data not available--installation in progress

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider?

Tariffed

☐ Discount

If there is a discount, how much is it? *Unknown at this time.*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Facility just coming on-line--no activity to date

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

Facility just coming on-line--no activity to date

9. What would the implications of having a greater level of bandwidth be?

Facility just coming on-line--no activity to date

10. Do you have e-mail?

☒ No

☐ Yes

11. Do you have Internet access?

☒ No

☐ Yes

If yes, do you incur long-distance charges by using it? No Yes

Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

SITE: ***Worthington Regional Hospital, Worthington, MN***

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: *Sioux Falls, SD*

Distance from city boundary: *60 miles*

4. Name of the project's telecommunications service provider: *Frontier Communications (local) and AT&T (long distance)*

5. Level of telecommunications service the project is currently using: (voice grade, ISDN, 384 Kbps, T-1 or equivalent) *Switched 56 (7 lines for up to 392 Kbps)*

6. Charges for telecommunications service:

Is there a monthly charge?

No

☒ Yes

If yes, how much is the charge?

\$48.54/line (7-Switched 56 lines)

Is there a usage-based charge?

No

☒ Yes

If yes, how much is the charge?

Final data not available--installation in progress

Is there a distance component (such as a per-mile fee) of the charge?

☒ No

☐ Yes

If yes, how much is the charge?

Was there an installation fee?

No

☒ Yes

If yes, how much was the charge? \$33.70/line + labor (*Installation in progress*)

Is the charge the regular tarrified rate, or is there a discount from the telecommunications provider?

Tarrified

☐ Discount

If there is a discount, how much is it? *Unknown at this time.*

7. How does the project use telecommunications in the delivery of health care? (For example--to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Facility just coming on-line--no activity to date

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

Facility just coming on-line--no activity to date

9. What would the implications of having a greater level of bandwidth be?

Facility just coming on-line--no activity to date

10. Do you have e-mail?

☒ No

☐ Yes

11. Do you have Internet access?

☒ No

☐ Yes

If yes, do you incur long-distance charges by using it? No Yes

Please estimate your number of hours of Internet use per month:

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it: